

Combining Colored Light Worksheet

Observations

1. Describe the color of the light emitted from the overhead projector.
2. Describe the initial colors observed in each circle when the plastic sheet is placed on the projector.
3. What is placed over each transparent color in order to refract the light and to combine the colors?
4. Record the name of the color produced when the following colors of light are combined.

Red and Blue =

Red and Green =

Blue and Green =

Red, Blue, and Green =

Post-Lab Questions

1. Using a textbook or another source of reference, define the following terms.

a. Visible light

b. Transmission

c. Absorption

d. Refraction

e. Pigment

2. When white light is passed through a prism, what is commonly observed?

3. Explain how the colored transparent sheets are able to change white light into colored light. Explain your answer using an example.

4. Explain how the lenses in this demonstration are used to combine the light from each circle.

5. Do you think that mixing combinations of red, blue, and green pigments (paints) together will produce the same effect as mixing light? Justify your answer with an example.

6. Design an experiment in which the effects of combining colors of paint are compared to combining colors of light. Be sure the experiment includes the following.
 - a. The colors of paint(s) needed.

 - b. Other additional materials.

 - c. The color combinations that must be tested.